SpectraView$_{II}$™ LCD Series

Color calibration solution (26" NEC MultiSync® LCD2690W2-BK-SV & 30" LCD3090W-BK-SV) ideal for color-critical applications

Unparalleled display performance for color-critical applications. Featuring an ultra-wide color gamut, the 26" NEC MultiSync LCD2690WUXi^2 and 30" LCD3090WQXi deliver an entirely new perspective to your desktop and allow you to view photographs and graphics in optimum color. These displays include the SpectraView$_{II}$ Color Calibration Solution, which combines award-winning NEC LCD monitor technology with a color measurement sensor and sophisticated software. The result is a highly accurate, reliable, repeatable and feature-rich display calibration and profiling solution.

Color and brightness uniformity were paramount in the design of these high-performance displays, making them ideal for graphic arts, desktop publishing, photography and other color-critical environments. In addition, with their wide-format design (16:10 aspect ratio), which provides roughly the same work area as two smaller-sized displays, you can simultaneously view/work in multiple application windows.

- Wide color gamut (97.8% coverage of AdobeRGB*)
- Auto Luminance control with X-Light™ Pro backlight/sensor design for consistent brightness and color
- ColorComp™ technology compensates for slight variations in luminance and color uniformity, providing even color across the screen
- IPS active matrix LCD provides superior screen performance, including wide viewing angles, lifelike flesh tones and dark black levels
- Supports internal programmable 12-bit lookup tables (LUTs) for calibration
- High resolution allows for more content to be displayed on a single monitor
- Designed for landscape or portrait usage without degradation of performance or the display's lifecycle
- Ambient light sensor and automatic backlight adjustment allows for use in any lighting conditions
- Digital and analog inputs with true MultiSync support for non-native resolutions

* 102% color gamut size vs. NTSC (1953)

SpectraView$_{II}$ Color Calibration Solution Features and Benefits

Quick and easy measurements. The SpectraView$_{II}$ system, available for Mac OS and Windows, uses an ultra-sensitive, custom-calibrated NEC/X-rite iOne Display 2 colorimeter to take color measurements of the display screen during calibration. The software analyzes these measurements and sends color adjustment commands directly to the display monitor. This means that color adjustments are made in the monitor rather than in the video graphics adapter, resulting in full use of the number of colors available on the graphics adapter and a much brighter image with the maximum possible color gamut. With SpectraView$_{II}$, the video graphics adapter is not used at all to make any gamma or tone response curve corrections to the display, so the full color resolution and fidelity of the system is maintained.

12-bit Internal Look Up Tables (LUTs) - Each LCD monitor supported by SpectraView$_{II}$ features three internal 12-bit LUTs. These tables allow precise adjustments to be made to the display's tone response curve with minimal reduction to the number of displayable colors. Since the tone response curve correction is stored within the display and not on the host system's video graphics card LUT, the display can be calibrated on one machine and then used on another and still maintain calibration as long as a digital video signal is used.

Display Data Channel Command Interface (DDC/CI) - SpectraView$_{II}$ communicates with the monitor using DDC/CI, which is a two-way communications link between the video graphics adapter and display monitor using the standard video signal cable. No extra cables are necessary. All adjustments to the monitor settings are done automatically using this communications link.

Multiple calibration sets - Different monitor calibrations can be instantly loaded, allowing quick and easy switching between different calibration settings without the need to re-calibrate the display. Each time a calibration set is loaded, the necessary monitor settings and ICC/ColorSync profiles are automatically updated.

Calibrated display information - At the end of each monitor calibration, an information window is displayed, which shows the results of the calibration and includes a wealth of information about the display such as the measured color gamut, grayscale color tracking, Delta-E and luminance values. Additional information about the display monitor such as the model name, serial number and the total number of hours that it has been in use are also displayed.

Calibration status validation - SpectraView$_{II}$ will query each calibrated monitor to see if any controls have changed since the last calibration. If anything has changed, the previous calibrated state can be restored automatically.

Application flexibility - SpectraView$_{II}$ provides many features and options that make it flexible enough to be used in a large variety of applications, including full DICOM support for medical imaging. The display luminance can be adjusted to either a specific user-defined value or set to the maximum the display can achieve. In addition, custom target response curves can be created in addition to presets such as L* and SMPTE.

Network support (Windows only) - SpectraView$_{II}$ integrates with the NEC NaViSet™ Administrator network software (available separately from your NEC representative) to provide remote network access and monitoring of display monitors. NaViSet™ Administrator is able to read, display and log the current calibration settings and status of displays on an existing network (LAN). This feature is particularly useful for large installations where central monitoring and asset management is needed.

Monitor locking - Once calibrated, the On Screen Display (OSD®) controls for the display monitors can be locked to prevent accidental or unauthorized adjustment, which may invalidate the calibrated state of the monitor.

Monitor profiling - After calibration, the display is automatically profiled and highly accurate ICC/ColorSync color profiles are generated and automatically registered with the color management system. These profiles use the Bradford Chromaticity Adaptation matrix.

Colorimeter function - The software features a colorimeter function, which allows direct measurements to be taken by the color sensor and the results displayed in a variety of different formats.

Model	MultiSync LCD2690W2-BK-SV	MultiSync LCD3090W-BK-SV
Display		
Viewable Size Image	25.5"	29.8"
Pixel Pitch	0.287mm	0.251mm
Pixels Per Inch	89 @ native resolution	89
Brightness (typical)	320 cd/m²	350 cd/m²
Contrast Ratio (typical)	1000:1	1000:1
Viewing Angle (typical)	178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR > 10	178° Vert., 178° Hor. (89U/89D/89L/89R)@ CR > 10
Response Time (typical)	Rapid Response™ (8ms Gray-to-Gray; 16ms Black-to-Black)	Rapid Response™ (6ms Gray-to-Gray; 12ms Black-to-Black)
Panel Bit Depth	12-bit internal LUTs, displays 16.7 million colors out of 68.5 billion color palette	12-bit internal LUTs, displays 16.7 million colors out of 68.5 billion color palette
Color Gamut*		
Coverage	AdobeRGB** - 97.8% / sRGB - 100%	AdobeRGB** - 97.8% / sRGB - 100%
Size	AdobeRGB - 108% / sRGB - 145.7%	AdobeRGB - 108% / sRGB - 145.7%
Synchronization Range		
Horizontal	31.5 - 93.8/119.2 KHz (Analog/Digital)	24 - 93.8 KHz (Analog/Digital)
Vertical	51 - 85 Hz	24 - 85 Hz
Video Bandwidth	NA	25.2 - 268.5 MHz (DualLink)
Input Signal		
Video	Analog RGB 0.7 Vp-p/75 Ohms	Analog RGB 0.7 Vp-p/75 Ohms
Sync	Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)	Separate sync: TTL Level (Positive/Negative) Composite sync: TTL Level (Positive/Negative) Composite sync on green: (0.3Vp-p negative 0.7Vp-p positive)
Inputs	DVI-D, DVI-I & VGA 15-pin D-sub	DVI-D (HDCP), DVI-I
Resolutions Supported (Analog/Digital)	720 x 400 @ 70-85 Hz 640 x 480 @ 60-85 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-75 Hz 1600 x 1200 @ 60 Hz 1920 x 1200 @ 60Hz	640 x 400 @ 70-85 Hz*** 720 x 400 @ 70-85 Hz 640 x 480 @ 60-85 Hz 800 x 600 @ 56-85 Hz 832 x 624 @ 75 Hz 1024 x 768 @ 60-85 Hz 1152 x 864 @ 70-85 Hz 1152 x 870 @ 75 Hz 1280 x 960 @ 60 Hz 1280 x 1024 @ 60-85 Hz 1400 x 1050 @ 60-75 Hz 1440 x 900 @ 60-85 Hz 1600 x 1200 @ 60-75 Hz**** 1680 x 1050 @ 60-75 Hz**** 1920 x 1200 @ 60 Hz 1920 x 1440 @ 30-60Hz**** 2560 x 1600 @ 30-60 Hz**** 720 x 480p @ 60 Hz 720 x 576p @ 50 Hz 1280 x 720p @ 50-60 Hz 1920 x 1080p @ 50-60 Hz
Native Resolution	1920 x 1200 @ 60Hz	2560 x 1600 @ 60 Hz landscape / 1600 x 2560 @ 60 Hz portrait
Additional Features	ColorComp - uniformity corrrection, X-Light Pro - backlight stabilization, AmbiBright - ambient light sensor, ultra-thin frame (bezel), No Touch Auto Adjust™, VESA Mount, sRGB, tilt, swivel, height-adjustable stand (150mm), pivot, quick-release stand, vacation switch (zero-watt mode), 12-bit LUTs, black level adjustment, overdrive, ECO Mode™, real-time clock, Analog/Digital CableComp™, TileMatrix™, TileComp™, SpectraView™ software-enabled	Ultra-thin frame (bezel), No Touch Auto Adjust™, NaViSet™ software, tilt, VESA Mount, sRGB, tilt, swivel, height-adjustable stand (190mm), pivot, quick-release stand, vacation switch, 12-bit LUTs, black level adjustment, AmbiBright, ColorComp, overdrive, ECO Mode™, real-time clock, X-Light Pro, Analog/Digital CableComp™, TileMatrix™, TileComp™, GammaComp™ MD software, standalone calibration, SpectraView™ software-enabled, Windows Vista™ Premium-certified
Touch-Capable	Designed for integration	Designed for integration
Voltage Rating	AC 100-120V / AC 220-240V	AC 100-120V / AC 220-240V
Power Consumption (typical)		
On	111W	150W
Power Savings Mode	1W	2W
Net Dimensions (WxHxD)		
with stand	23.2 x 17.5 x 12 in. / 589.8 x 444.2 x 306mm	27.1 x 18.8-26.3 x 13.5 in./ 687.3 x 478.6-668.6 x 342.8mm
without stand	23.2 x 15.1 x 4.1in. / 589.8 x 383.4 x 104mm	23.2 x 15.1 x 4.1 in./ 589.8 x 383.4 x 104mm
Net Weight		
with stand	27.7 lbs./12.6 kg	40.7 lbs. / 18.5 kg
without stand	20.2 lbs./9.2 kg	31.9 lbs. / 14.5 kg
VESA Hole Configuration Specifications	100 x 100mm	100 x 100mm and 200 x 100mm
Environmental Conditions		
Operating Temperature	5-35° C / 41-95° F	5-35° C / 41-95° F
Operating Humidity	30-80%	30-80%
Operating Altitude	3048m / 10,000 ft.	3048m / 10,000 ft.
Storage Temperature	-10-60° C / 14-140° F	-10-60° C / 14-140° F
Storage Humidity	10-85%	10-85%
Storage Altitude	12,192m / 40,000 ft.	12,192m / 40,000 ft.
Safety Standards	UL/C-UL, UL60601, CE, Gost/PCT, PSB, CCC, TUV GS, FCC Class B/Canadian DOC, C-tick, MPR II / MPR III, VCCI (class 2), JIS C 61000-3-2, static electricity guideline, low emission guideline, TUV-Ergonomie, ISO9241-307, TCO '03, TCO '6, US Mercury regulations, WEEE, RoHs, SASO, Energy Star 4.0 Tier 2, GEEA, JEITA VOC Guideline. J-Moss, Windows XP, DEN-TORI	UL/C-UL, UL60601, CE, Gost/PCT, PSB, CCC, TUV GS, FCC Class B/Canadian DOC, C-tick, MPR II / MPR III, VCCI (class 2), JIS C 61000-3-2, static electricity guideline, low emission guideline, TUV-Ergonomie, ISO9241-307, TCO '03, TCO '6, US Mercury regulations, WEEE, RoHs, SASO, Energy Star 4.0 Tier 2, GEEA, JEITA VOC Guideline. J-Moss, Windows XP, DEN-TORI
Limited Warranty	4 years parts and labor, including backlight	4 years parts and labor, including backlight / 2-day Advanced Exchange service
Technical Support	M - F (7am - 7pm CST)	M - F (7am - 7pm CST)

SpectraView$_{II}$ Software Requirements

Apple Mac OS X 10.2.8 or higher/Microsoft Windows 2000, XP, XP x64, Server 2003 or Vista 32 bit.
At least one available USB port for GretagMacbeth color sensor.

Visit www.necdisplay.com for the latest requirements.

* Color gamut size and coverage calculated as 2-D gamut area in CIE 1931 xy colorspace. Size is the total relative display gamut area and includes any colors outside the reference gamut. Coverage is the relative display gamut area contained inside the reference gamut. NTSC values provided for comparison purposes - modern broadcast video uses SMPTE-C, ITU-R BT, 709-5/sRGB or EBU primatries.

** AdobeRGB is a standard defined by Adobe Systems Incorporated.
*** 640 x 400 available with DIGITAL input only only
**** 30 Hz refresh rate available with ANALOG input only

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